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#1

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IN TWO SECTIONS

Section I

N.A.C.A. LIBRARY

IN THIS ISSUE

Bank Service Charges by Raymond L. Thibault 691
The Application of Bank Costs to Depositors' Accounts, by Wilbur F. Lawson 701
Costing of Accounts and Account Analysis for a Bank, by John Sellors..... 707
Procedure for Proving of Bank Deposits and The Figuring of Float, by J. D. Smith 713
Cost Control of Bank Operations, by Ottmar A. Waldow..... 721

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EDITORIAL DEPARTMENT NOTE

In most lines of business it is now considered proper to speak of "the recent depression," but in banking it is still "the present depression." Reduced investment income and low interest rates appear in prospect for some years to come and, as a consequence, banks have been forced to examine rather closely into their operating costs and attempt to eliminate all sources of possible loss. Thus bank cost accounting is becoming increasingly important, and it is proper that its increased importance be recognized through the publication in this issue of the BULLETIN of five articles on that subject.

In our first article, Raymond L. Thibault discusses the justification for and calculation of bank service charges and explains the arrangement followed by members of the Bridgeport Clearing House. Mr. Thibault has had wide experience in banking, having spent eight years with the City Savings Bank of Bridgeport, before joining The Black Rock Bank and Trust Co. on its organization ten years ago. He is now Assistant Treasurer of this bank as well as Director and Treasurer of the Black Rock Land and Improvement Co.

Our second article is by Wilbur F. Lawson, Vice President and Controller of The First National Bank of Boston. Beginning his banking career as a messenger in Hartford, Connecticut, Mr. Lawson advanced through various clerical positions to the post of receiving teller, became an Assistant Bank Examiner, joined the Army, returned to banking with the foreign department of the First National Bank of Boston, advanced to the position of Auditor, then Controller, and is now Vice President and Controller. The present article is an excerpt from a talk which he delivered before our Boston Chapter.

John Sellors, Assistant Cashier and a Director of The National Marine Bank of Baltimore, contributes our third article. Mr. Sellors is a graduate of the Baltimore College of Commerce, holds an LL.B. degree from the University of Maryland and is a Maryland C. P. A.

Our fourth article is by J. D. Smith whose early experience was in bank work. Following four and one-half years with The Molson's Bank of Montreal, Mr. Smith joined the Felt and Tarrant Manufacturing Co., as Manager of their Ottawa office. Since then, over a period of eighteen years, he has been connected with the adding and calculating machine industry in various cities. Mr. Smith is now Manager of the Rochester office of Felt and Tarrant.

Ottmar A. Waldow, the author of the final article of this group, has a fine background of bank accounting experience. From 1922 to 1929, he was Auditor of The Highland Park State Bank of Detroit, leaving to become Controller of the Guardian Detroit Union Group, Inc. For the last two years he has served as Auditor of The National Bank of Detroit.

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NATIONAL ASSOCIATION OF
COST ACCOUNTANTS

MARCH 1, 1936

BANK SERVICE CHARGES—THEIR JUSTIFICATION AND CALCULATION

By Raymond L. Thibault, Assistant Treasurer,
The Black Rock Bank and Trust Co., Bridgeport, Conn.

RECENT experience has served to emphasize the fact that banks have cost problems which (through lack of cost accounting knowledge, or the "laissez faire" attitude on the part of the bankers so long as investments produced sufficient income) have been overlooked too long for the good of the public as well as the banking profession. The recent depression (or from the bankers' viewpoint, the current depression) has proven that earnings from investments are not dependable, and the prospects for large future profits from this source appear to be very much limited because of changed conditions and government regulations.

For any city, state or nation to be prosperous, everyone must receive a reasonable compensation for services and efforts, whatever they may be, and this applies to banks as well as to individuals and other types of business enterprise. Service cannot be rendered for nothing. Rather all service is entitled to reasonable compensation. With this in mind the banking system is finding it necessary to make a reasonable charge for all of its services so that it can carry out its part in the program of prosperity for the community.

Need for Service Charges Shown by Recent Study

As an illustration of the type of information which bank cost accounting will provide and an indication of the need for making service charges against depositors, the "Analysis of Estimated Cost and Estimated Earnings on Depositors' Accounts Classified by Size of Balance," shown on page 692, is presented. The figures shown there were obtained from a survey covering operations for a period of six months. For this illustration the figures have been reduced to a monthly basis.

Most banks, whether large or small, find that from 65% to 70% of their accounts have average balances of less than $500, leaving only 30% to 35% of the accounts with average balances of more than that figure. Because of the large percentage of accounts with

ANALYSIS OF ESTIMATED COST AND ESTIMATED EARNINGS ON BANK ACCOUNTS
CLASSIFIED ACCORDING TO SIZE OF BALANCE

Balance	No. of Accts.	% of Total	Combined Balances	% of Total	Debits	% of Total	Credits	% of Total	Estimated Cost	Est'ma'd Earnings Based on 4% Net
Up to $ 25	182	33	$ 1,400	0.7	1,258	22	433	24	$162.83	$ 4.70
$ 25- 50	71	13	2,400	1.2	790	14	230	14	77.66	8.00
50- 150	118	23	9,400	4.3	1,409	27	427	24	135.12	31.33
150- 300	67	12	14,000	6.5	764	12	240	14	75.31	46.66
300- 500	26	5	11,000	5	305	6	102	6	30.05	35.83
500- 1,000	23	8	15,000	7	500	10	179	11	39.97	50.00
1,000- 2,500	20	4	32,000	15	400	7.5	84	5	29.24	106.66
Over 2,500	11	2	131,200	60.3	81	1.5	37	2	10.70	437.32

small balances, it has been considered impractical to prepare a cost schedule for these accounts, but the time is not far distant when every account will be analyzed individually and made to pay its own cost. One need only refer to the analysis on page 692 to understand the need for such analysis.

Plan Adopted by Banks of Bridgeport

After much consideration, based on known facts, the member of the Clearing House of Bridgeport, Connecticut, decided to make a monthly analysis of each account with a balance of over $500 or any account below $500 which has an undue amount of activity, and to apply the following Schedule of monthly charges to all other accounts:

On Balances of	*Base Charge*	*Debit Items Permitted*
$ 1 - $ 99	$1.00	12
100 - 199	.50	12
200 - 299	....	12
300 - 399	....	14
400 - 499	....	16

A charge of five cents each is made on all debit items in excess of the numbers shown.

In analyzing the accounts of depositors with average balances of over $500 the following standard rates are used:

Protection—18 cents per month per thousand dollars gross
Overhead—51 cents per month per account
Debits—3½ cents each
Credits—6 cents each
Clearing House Items—1 cent each
Transit Items—1½ cents each
Return Items Deposited—10 cents each

The charge for protection is made to cover insurance against hold-ups, forgeries, burglaries, fires, embezzlements and the cost of an alarm system. The charge for overhead includes the costs of bookkeeping machines, vault space, depreciation, statements, filing equipment, light, fuel, power, taxes, buildings, ledger cards, administrative, supervisory and messenger expenses.

Application of These Rates to Customers Account

The following account analysis indicates how these rates are applied:

Average daily ledger balance			$2,500
Less: Average daily float	$1,500		
Reserve required—12%	300		1,800
Balance available for investment			$ 700
Income earned at 4% per annum net			$ 2.33
Cost:			
Activity			
56 checks @ 3½ cents	$1.96		
20 deposits @ 6 cents	1.20		
100 transit items @ 1½ cents	1.50		
200 clearing house items @ 1 cent	2.00	$6.66	
Overhead			
Protection—18 cents per M per month	$45		
Maintenance	51	.96	
Total cost			7.62
Net cost			$5.29

Accounting Forms Required

To keep the cost of analyzing the accounts, posting, recording, and the service charges low, it was necessary to provide a very inexpensive, simple set of forms. After much study based on practical accounting and banking knowledge, the following illustrated forms were put into use. Up to the present time they have proven satisfactory because they are inexpensive, simple, and very efficient due to the use of a color scheme.

Form A is a return item slip, color white, gummed at left end. It is attached to checks, notes, etc., returned for any of the reasons

FROM THE BLACK ROCK BANK & TRUST CO. BRIDGEPORT, CONN.

ACCOUNT
- ☐ Attached
- ☐ Closed
- ☐ No Account
- ☐ Savings Account not Subject to Check

AMOUNT
- ☐ Altered
- ☐ Filling and Figures Differ
- ☐ Guarantee
- ☐ Illegible

DATE
- ☐ Altered
- ☐ Missing
- ☐ Not Due
- ☐ Old Date
- ☐ Post Dated

ENDORSEMENT
- ☐ Bank Stamp
- ☐ Clearing House Stamp
- ☐ Forgery
- ☐ Guarantee
- ☐ Incomplete
- ☐ Irregular
- ☐ Ink Endorsement Required
- ☐ Missing
- ☐ Official Endorsement Required
- ☐ Written Endorsement Required
- ☐ Witness Required

FUNDS
- ☐ Not Sufficient
- ☐ No Funds
- ☐ Uncollected

Form A

ITEM
- ☐ Forgery
- ☐ Must Be Certified
- ☐ Not Drawn on Us
- ☐ No Authority to Pay
- ☐ Non Negotiable
- ☐ Not Properly Drawn
- ☐ Payment Stopped
- ☐ Recalled
- ☐ Renewed Direct

PAYEE
- ☐ Name Altered
- ☐ Name Missing

SIGNATURE
- ☐ Counter
- ☐ Illegible
- ☐ Missing
- ☐ Not Authorized
- ☐ Not Correct
- ☐ Person Deceased

VOUCHER
- ☐ Missing
- ☐ Not Signed
- ☐ Receipt Not Signed

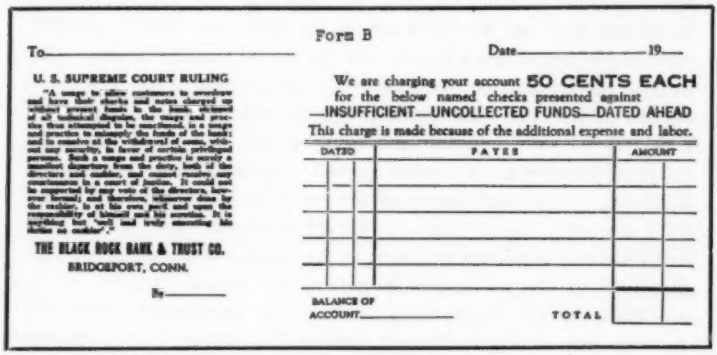
MISCELLANEOUS
- ☐ In Bankruptcy—Receivership
- ☐ Never Pays Drafts

checked. Note the number of reasons that may hold up payment of an item.

Form B is a service charge ticket for checks, drafts which can not be paid due to insufficient and uncollected funds, and checks dated ahead. The color is yellow, with five tickets to a perforated sheet and backed with a plain white sheet. These sets are bound between an inexpensive set of press board covers. By using carbon paper, a copy of the writing on the original is obtained on the plain white sheet as a permanent record. This sheet is not perforated. The person charged receives no notice of these charges until he obtains his monthly statement, because it is assumed that he knows these facts when he draws the checks. This form is very inexpensive and efficient because it can take care of as many as five items against the account at one time.

Customers Statements

Customers' statements of checking accounts, Form C, is yellow in color. This form was designed to be used with the newest bookkeeping equipment obtainable, which provides machine posted information for analyzing accounts. Elimination of the reconciliation form usually printed on the reverse side and which is seldom used or understood by the customer, reduces the cost of this form 20%. The stub attached to the right side of the statement form contains original machine posted record of most of the items necessary to analyze an account. Remaining items are



Form B

To_____ Date_____ 19__

U. S. SUPREME COURT RULING

"A usage to allow customers to overdraw and have their checks and notes charged up without present funds in the bank, in spite of all technical objection, the usage and practice thus attempted to be established, is a usage and practice to monopolize the funds of the bank and to remove all the withdrawal of same, without any security, in favor of certain privileged persons. Such a usage and practice is merely a monetary discretion, from the duty, both of the directors and cashier, and cannot receive any countenance in a court of justice. It could not be supported by any vote of the directors, however formal; and therefore, whatever done by the cashier, to act his own peril and upon the responsibility of himself and his sureties. It is nothing but 'theft and trust concealing his further on cashier'."

THE BLACK ROCK BANK & TRUST CO.
BRIDGEPORT, CONN.

By_____

We are charging your account **50 CENTS EACH**
for the below named checks presented against
—INSUFFICIENT—UNCOLLECTED FUNDS—DATED AHEAD
This charge is made because of the additional expense and labor.

DATED	PAYEE	AMOUNT

BALANCE OF ACCOUNT_____ TOTAL

posted by hand in the spaces provided at the bottom of the stub. The columns shown on the stub are used as follows: the C.H. column records the number of clearing house items deposited; TR. column records the number of out-of-town items deposited; US column records the number of checks on our own bank deposited; FLOAT column records in dollars all uncollected items reduced to a one-day basis. For simplicity, the right hand diget is omitted, any amount above $5 being called $10.

This information is obtained from the original deposit ticket, which has already been analyzed in this manner by hand. These stubs, being already in alphabetical order, are filed by months so that the detail can be referred to very quickly when necessary.

Permanent Record of Accounts Analyzed

Form D is a final and permanent record of accounts analyzed, one sheet per account, color yellow. The detail from the stub of Form C is transcribed either by hand or typewriter to this form, which is used to calculate earnings, cost and results of an account, loss being posted in red ink. When an account has been charged for the loss shown, a pen check mark is placed in front of the space showing the amount. This check mark is used to show that the loss has been charged because a good account will sometimes show an occasional very small loss, which can not be charged because of the excess earnings of other months. Accounts of reliable customers, showing monthly a loss under one dollar, will be charged quarterly to save labor and expense. In this case the net income for November and the net loss for December are checked with a horizontal line and the final month in which the charge is made receives the usual check mark. By the use of this check mark system, it readily can be seen that the charge was made quarterly instead of monthly. To obtain a concise picture of an account for a period, to save expense and filing space, this sheet has been designed to cover a six months' period. An account to be analyzed beginning in the third month of the period would be entered in the third column. Under title of "Other Services," spaces are provided for any items not included in the regular schedule of activity charges. If the net available investment balance results in an overdraft, due to checks being paid against uncollected funds, the discount rate of 6% is charged against the overdraft and entered

PLEASE EXAMINE. IF NOT CORRECT, REPORT AT ONCE

Raymond L. Thibault
760 Wilcoxson Ave.
Stratford, Conn.

Raymond L. Thibault
760 Wilcoxson Ave.
Stratford, Conn.

CHECKS	DATE	TAX	DEPOSITS	C. H.	TR.	FLOAT	CD	DATE	CHECKS PAID	NEW BALANCE
AMOUNT BROUGHT FORWARD →										
	Form C							C	Stub	
ACCORDING TO OUR RECORDS THIS IS YOUR BALANCE →										

COMPLETE BANKING SERVICE

THE BLACK ROCK BANK AND TRUST CO., BRIDGEPORT, CONN.

MEMBER THE BRIDGEPORT CLEARING HOUSE ASSOCIATION

Form D

ANALYSIS OF ACCOUNT OF THIBAULT. RAYMOND. L. 760 WILCOXSON AVE STRATFORD SHEET No. 1

FOR MONTH OF	AUG -- 1935	SEP -- 1935	OCT -- 1935	NOV -- 1935	DEC -- 1935	JAN -- 1936
Average Daily Gross Balance	1 372	1 043	1 895	1 503	4 763	4 983
Minus						
Average Daily Float	514	459	291	135	408	374
Reserve (17 % Gross Bal.)	180	175	327	180	511	597
Other Items	678	584	518	315	919	971
Net Available Investment Bal.	694	459	1 377	1 188	3 344	4 015
Income on above balance (1/2 % per month)	2 31	1 53	4 59	3 96	11 14	13 37

COST		AUG -- 1935		SEP -- 1935		OCT -- 1935		NOV -- 1935		DEC -- 1935		JAN -- 1936	
OVERHEAD	M			M		M		M		M		M	
Protection .15 per M per Mo.			75		19		34		27		77		90
Maintenance			51		51		51		51		51		51
ACTIVITY	Rate	Items		Items		Items		Items		Items		Items	
Clearing House Items	@ .01	34	34	67	67	59	59	27	27	142	1 42	136	1 36
Transit "	@ .015	11	17	15	23	8	12	6	09	107	1 61	99	1 46
Debit Items Paid	@ .035	91	3 19	113	3 95	31	1 83	44	1 54	5	18	5	18
Credits	@ .06	23	1 38	23	1 38	17	1 02	9	54	126	7 56	127	7 62
OTHER SERVICES													
Ret. Items Deposited	@												
Collection Items	@												
Special Ck. Book													
EXTRA STATEMENTS @ 15										4	60	4	60
EXTRA CHECKS ITEMS										40	60	49	74
WIRDRAW SERVICE @ 015													
Miscellaneous Items			5 84		6 83		5 41		3 22		13 25		13 37
Net Results		✓	3 53		5 30		(82)	–	74	–	2 11	•	NONE

Savings Acct. _____ Trust Dept. _____ Memo. _____

Safe Deposit _____ _____ _____

Stockholder. _____ _____ _____

in red ink. This denotes an additional expense instead of an income from the account. This cost is added to the activity expenses so that the bank can be reimbursed for the additional loss.

Form E is a charge ticket for analyzed accounts, color white, very inexpensive because printed in simple form, not numbered, set up to take care of monthly or quarterly charge. The information for these tickets is obtained from Form D. They are used for posting against their respective accounts and returned to the customers with their canceled checks.

Tickets for Accounts Not Analyzed

Forms F-1, F-2, F-3 are charge tickets for accounts not analyzed. A color scheme is used for accuracy and speed. All information required that could be printed was included to simplify work, and yet the form is very simple, resulting in a low cost. Only hand posting required is for excess activity. The information for these tickets is obtained from the bank's customer's ledger card, which has been analyzed by a clerk familiar with the accounts. The amount to be charged is entered in ink opposite the final date of the month analyzed. Another employee enters by hand on to the proper charge tickets the amount. Tickets are turned face down in the order they are made out. A tape of the ledger card amount is made, with sub-totals for each letter of the alphabet. The charges can be posted when convenient because of the alphabetical tape control. To illustrate, the first day A to J, second day K to M, and so on, resulting in no great amount of extra posting

Form E

Date Feb 10 1935

Thibault, Raymond L.

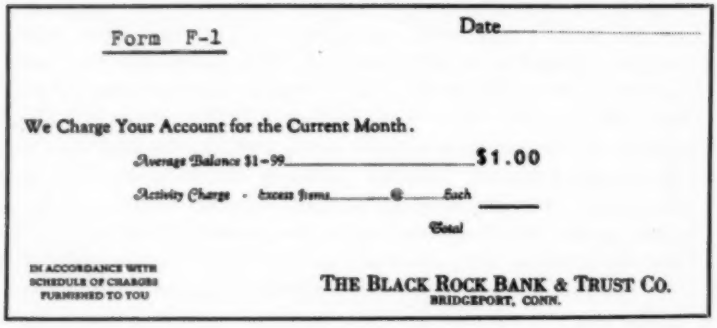
	DOLLARS	CENTS
We Charge Your Account	1	37

For Actual Cost Incurred In Excess of Income Earned On Average Net Available Balance.

☐ MONTH OF
☑ QUARTER ENDING | Jan. 1935

THE BLACK ROCK BANK & TRUST CO.
BRIDGEPORT, CONN.

in any one day. When posting to the ledger card, the amount is taken from the ink entry on the card. After posting the card is left out and placed face down. The customer's statement is posted from the ledger card but returned to its file immediately after posting. If the machine controls balance, we are ready to refile the ledger cards in the tray. With two persons working together, one files the ledger cards and calls the name while the other places in the customer's paid check file the respective tickets, which are in the same order, calling the amount which verifies the posting. By this method we check automatically all postings, and eliminate the necessity of writing the names on the tickets of the accounts to be charged.


Form F-1

Date.....

We Charge Your Account for the Current Month.

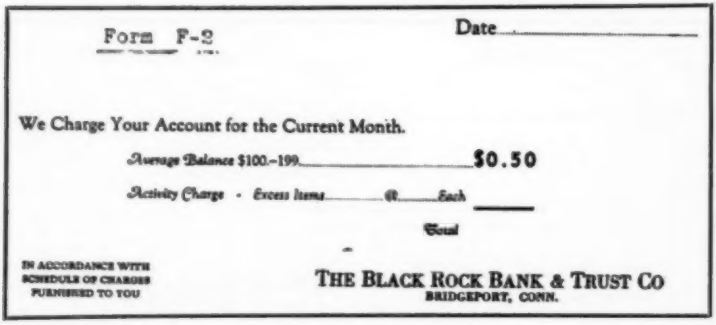
Average Balance $1-99 ..... $1.00

Activity Charge - Excess Items ..... @ ..... Each .....

Total

IN ACCORDANCE WITH SCHEDULE OF CHARGES FURNISHED TO YOU

THE BLACK ROCK BANK & TRUST CO.
BRIDGEPORT, CONN.


Form F-2

Date.....

We Charge Your Account for the Current Month.

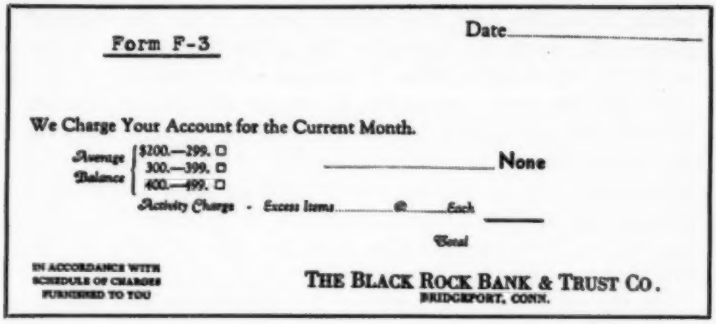
Average Balance $100-199 ..... $0.50

Activity Charge - Excess Items ..... @ ..... Each .....

Total

IN ACCORDANCE WITH SCHEDULE OF CHARGES FURNISHED TO YOU

THE BLACK ROCK BANK & TRUST CO
BRIDGEPORT, CONN.



Date_____

Form F-3

We Charge Your Account for the Current Month.

Average Balance { $200.—299. ☐ 300.—399. ☐ 400.—499. ☐

_____ None

Activity Charge - Excess Items_____@_____Each _____

Total

IN ACCORDANCE WITH SCHEDULE OF CHARGES FURNISHED TO YOU

THE BLACK ROCK BANK & TRUST CO.
BRIDGEPORT, CONN.

THE APPLICATION OF BANK COSTS TO DEPOSITORS' ACCOUNTS

By Wilbur F. Lawson, Vice President and Controller, First National Bank, Boston, Mass.

THE most perplexing problem to every bank man who has gotten into the subject of bank costs has been the treatment of overhead.

Many bank men who have written and spoken on this subject seem to get all tangled up over this item of overhead, but the plan which I have in mind and am going to present to you entirely eliminates general overhead as a factor in determining the cost of handling checks, deposits and other such transactions.

In the strictly commercial department of any bank there are two primary sources of earning power, first the capital structure belonging to the shareholders, and second the deposits left with the bank.

Certain Expenses Chargeable Against Income on Shareholders' Capital

When the banking business is undertaken, those initiating it expect to advance certain funds to furnish a place of business, a capable management and necessary advertising and publicity. That is to say, the shareholders expect to furnish a number of essentials and look to business resulting therefrom for their returns, or,

putting it another way, the earning power of the shareholders' money will provide the foundation and goodwill of the enterprise, while the volume and conduct of business will provide the profit.

It therefore seems reasonable to assume that many expenses may be charged against the income received through investing the capital, surplus and undivided profits. For instance, in computing the costs of handling checks it is certainly stretching a point to include in that figure any part of the expense of advertising or new business solicitation since the account is in no way benefited therefrom and does not require such expenditures.

On the other hand the nature of the business involves this expense and any bank expects to meet it. Consequently it is part of the burden of the shareholder in undertaking the business to stand these items and he should pay for them from the return which his money earns. If the bank is properly conducted, there will be profits from the deposits handled and it is these profits which are awarded to the owner or shareholder.

Thus we come to the conclusion that the income from the capital structure meets certain expenses while the income from the deposit business meets a different class of expenses, leaving a reasonable profit. This method provides the means of arriving at per-item costs which will be absolute, or in other words, eliminates from item-costs the general overhead which at best can only be distributed by estimate.

It is axiomatic that a bank must put its deposits to work in order to render banking service to its depositors. Although a savings bank can invest its deposits in securities and long term loans at a minimum of cost, a commercial bank must stand ready at all times to meet the demands of commerce and industry if it is to serve the purpose for which it is founded. The depositor in a commercial bank should realize these facts and therefore be willing to assume in one way or another the cost of investing his money.

Certain Direct Deductions from Gross Income

Most banks which have gone into this subject are applying an investment cost directly against each customer's account in proportion to his balance. We have simplified the application of investment cost by the reducing of the gross income from loans and

investments by the operating cost of the loan and credit departments, plus a reasonable sum to cover normal losses, thus arriving at a lower average yield rate to be used in computing the income on loanable funds.

In justification of this method we would point out that banks usually charge higher rates on loans that give them more work, such as collateral loans, the discounting of a number of small bills receivable, small loans in general that require as much time as the bigger ones, and particularly loans that involve great risk and demand more attention on the part of officials, and consequently by reducing the gross income in the manner previously stated we obtain an average yield rate that more closely approximates the return on the highest grade commercial loans.

Losses are sustained in almost any line of endeavor and as the business man must adjust his prices to cover such eventualities so must the banker take this into consideration in quoting his rates.

From the foregoing it will be seen that before computing the activity and investment cost it is necessary to go over the expense records and classify as general overhead all expenses which cannot be definitely allocated to a particular type of item.

This classification will designate as activity costs the salaries, rent, supplies, and depreciation on equipment and certain sundry expenses of such departments as bookkeepers, paying and receiving tellers, and those other departments which are actually handling deposits, cash, checks, and drafts. The same types of expenses for the loan and credit departments are used in arriving at the investment costs.

All Overhead May Be Eliminated from Cost Calculations

We have found from the figures of several banks that the total of all general overhead expense is less than the amount earned on capital, surplus and undivided profits and so by applying our theory all overhead can be eliminated from the calculations of costs.

In talking with a customer regarding an analysis of his account the bank can positively assure him, under this plan, that the activity costs are not loaded and that he is not paying for high-priced furniture in the officers' space, nor the gold leaf on the walls and ceilings, nor for the automobiles, advertising, new business solicitation, general administrative officers' salaries and similar ex-

penses that are of no direct benefit to him and in which he is not in the least interested.

Analysis of a Depositor's Account

Now let us take up the actual analysis of a depositor's account. John Brown & Co. has an account with an average ledger balance of $5,000 this month. The checks drawn on other banks which they have deposited and which take us one or more days to collect average $200 per day. This $200 is what we call the uncollected balance or "float." This $200 of float is of no use to us for lending purposes until it is finally collected and so we make a deduction from the ledger balance of the $200. This makes the net collected balance as we term it, just $4,800.

The National Bank Act requires to keep 10% of this net collected balance on deposit with the Federal Reserve Bank. We earn nothing on this deposit with the Federal Reserve Bank.

Then for the sake of good banking and because we know from experience that there are fluctuations from day to day in the net collected balances of our customers we figure to keep an extra 5% in cash or on deposit in our correspondent banks in New York or elsewhere. This means that the 15% (normal reserve), of the net collected balance cannot be used as loanable funds. Deducting 15% from $4,800 leaves us $4,080 to invest in loans.

Let us figure that we earn 3% on this money. This 3% is after taking about ¾ of 1% for the investment costs. You will recall that investment cost as I explained before is the operating expense of our loan and credit departments and includes salaries of loaning officers as well as a reserve for uncollectible loans.

Now, 3¾% return on our invested funds is a rather high rate in present times but we cannot penalize our depositor too severely for our inability to put our funds into loans and investments so we use 3¾% less the investment cost of ¾ of 1%, or 3% as our net earning rate.

Three per cent per annum, or in other words ¼ of 1% monthly, on $4,080 of loanable funds in this case yields $10.20 of income for the month in question.

Then we find that John Brown & Company have drawn 100 checks against their account. These 100 checks figured at 3½ cents each cost us $3.50. There have been 12 deposits at a cost

of 7c. each or 84c. in total and 123 checks drawn on other banks were left with us for deposit, costing at 7/10 of a cent per check, just 86c. The total costs on this account are therefore $5.20 for the month.

Deducting the costs of $5.20 from the income of $10.20 leaves us a profit of $5.00 for the month.

Now that $5.00 of profit is the amount we feel we should earn on that account. It is at the rate of exactly 1¼% per annum of the net collected balance. This brings me to the question of the return the stockholders can and should expect from the depositors' funds.

To What Rate of Return Is a Bank Entitled

Banks figure that they are entitled to a profit of from 1% to 1½% on the net collected balance of each depositor. While this may be an accepted fact among the banking fraternity, still there is no reason why the depositor should accept it as a criterion unless the bank can justify the reasonableness of requiring a balance that will allow such a profit.

The matter might be approached somewhat as follows: Certainly the investor in the shares of the bank hopes for at least 6% on his investment, to be paid either as a dividend or to accumulate with the bank in the surplus account, thus enhancing the value of his holdings, and giving added protection to the depositors at the same time.

If this were not true the investor might better place his funds in some other business. If we take 6% of the average capital, surplus and undivided profits for the year and divide it by the total average *collected* deposits for the same period the resulting percentage would indicate what should be a fair return on any account.

If the ratio of deposits to capital, surplus and undivided profits is 5 to 1, the resulting percentage will be 1.2%. At a ratio of 4 to 1, the percentage will be 1.5%. At a ratio of 6 to 1 the percentage will be 1%. Under this theory, every checking account should show an earning of about 1% to 1½% to pay its way.

In Boston we have selected 1¼% as the proper amount of profit. You will find banks in other cities that require 1½%, but we feel that if we can obtain a minimum of 1¼% our average will be more nearly 1½%. Therefore this analysis of John Brown

& Co.'s account has shown the required profit at the rate of 1¼% and we are satisfied with the results.

Analysis of an Account Which Does Not Pay Its Way

Now let us suppose that Smith & Co. also has an account with us and that the activity in their account is exactly the same as that of the account of John Brown & Co., but the net collected balance maintained is only one quarter of the amount, or $1,200.

We do exactly the same amount of work for Smith as we do for Brown. The income on the loanable funds from Smith's balance is only $2.55 and the expense is $5.20, showing a net loss to us of $2.65.

Is it not fair that Smith should keep as much money with us as John Brown & Co. do, or failing to do so, is it not fair that they should pay us the loss of $2.65 plus $5.00 which represents the profit we would have made had they kept the proper balance? We feel that it is not only fair to us that they should do so but also only fair to John Brown & Co.

If we are going to carry Smith's balance at a loss why should not Brown draw his balance down to $1,200 and put his extra $3,600 in the savings account at 2½% or 3% interest and make an extra $7.50 or $9.00 per month?

Alternatives Available

No, if every account was like the Smith account the bank would soon go out of business so we must call Smith in, and have a talk with him and either he must put his account on a satisfactory basis or we shall have to charge him something for our services.

If Smith does not like this or refuses to do anything about it, we are sorry, but we cannot keep his account. In the first place, we would be violating the law which prohibits us from the indirect payment of interest on any account and, secondly, we feel that he would be asking for an unfair advantage.

If Smith has an extra $3,600 in the savings bank at 2½% interest, he can draw the money out and put it into the checking account, thereby sacrificing $7.50 monthly in interest but saving $7.65 in checking account service charges.

This is all there is to account analysis. The bank feels that it should cover its cost and make a profit on the account. The

profit we ask is approximately 10 cents per month on each $100 of net collected balance.

I have often said that we should much prefer that every depositor carry a balance adequate to cover the activity in his account rather than make any services charges whatever. We do not like the idea of service charges any better than the depositor does. But we cannot give free services to anyone who comes along. A bank is not a philanthropic institution. We are in business for a profit. We have only one thing to sell and that is—banking service. We have to make a profit on that one article or we do not make a profit at all.

I have heard the argument that a bank should not expect to make a profit in these times since no other business can make money. But, who wants to put his money in a bank that is not profitable? Many people have done that thing to their sorrow and the memory is still fresh in their minds. A bank must be profitable to be strong and the depositor for his own protection should be interested in doing business only with a strong and profitable bank.

So long as the funds which you have on deposit with the bank will earn enough to pay for the services which you call on it to render you and leave a reasonable margin of profit, we are perfectly satisfied with our relations.

But when the depositor asks for or expects a free ride, we, in fairness to other depositors as well as to ourselves, have to tell him he must pay his fare or get off and walk.

COSTING OF ACCOUNTS AND ACCOUNT ANALYSIS FOR A BANK

By John Sellors, Assistant Cashier,
The National Marine Bank, Baltimore, Md.

UNTIL recent years bankers gave little thought to the application of cost accounting to their institutions. For some time now they have watched their income steadily decline and have reduced expenses, but try as they may it has not been possible to effect savings in proportion to the reductions in income. Changing conditions have made it desirable for bank executives to determine the operating cost by departments and by items handled.

Among the advantages to be gained by having accurate cost data available may be mentioned the elimination, where possible, of unprofitable departments, determination of the efficiency of employees, and the ability of the bank to determine accurately the net income or loss on each account.

Although the application of cost accounting to banking operations is a rather new development, much time and thought have been devoted to solutions of the problems presented. There is some controversy regarding details, as might be expected, but the authorities generally agree on the procedure.

I will attempt only a general outline of the methods employed in determining costs and their application to account analysis, rather than a discussion of the many details which would require too much of your time, if not tax your patience.

While bank expenses are not subject to material variations, the average cost of handling items should be determined on an annual basis in order to take into consideration the fluctuations in number of items handled during different seasons.

Complete Cost Accounting Not Used in Banks

Complete cost accounting systems, familiar to cost accountants, whereby costs are regularly accumulated are not maintained in banks. In fact, such systems are neither necessary nor practical. "Cost finding" more accurately describes the method of determining costs in banking operations. Generally speaking, the application of this method consists of allocating the expenses for a given period to each department and dividing the departmental cost by the number of items, that is, checks, drafts, deposits, etc., handled by the respective departments.

Determining the Volume

It is necessary first to find the number of items handled by each department for a given period. This would appear to be a laborious task in itself, but it is in fact quite easy and requires only a few minutes a day. All departments run adding machine lists or proofs of the items handled. These adding machine lists average six figures to the inch. All we need do is measure the lists and keep a daily record of the volume handled.

The Flow of Items Through the Departments

Before proceeding further it might be well to outline briefly how the items flow through the various departments. Deposit slips and the checks listed thereon are kept together by the receiving teller and turned over, in bunches, several times each day to the proof department. Proofs are then made, after sorting the items, on sheets containing headings for cash, city or clearing house checks, foreign or out-of-town checks and checks drawn on the bank in which deposited, which we shall call debit items. A summary of these totals must agree with the aggregate of the deposit ticket totals. A verification of the additions on the deposit tickets is thus effected and figures obtained which, when summarized at the end of the day, are used for posting to the general ledger. These sheets are known in different banks by various names, such as, batch sheets, strike sheets, proof sheets, etc., but all serve the same purpose.

The deposit tickets and debit items are then handed to the individual bookkeepers; city checks go to the clearing house desk where they are sorted as to the respective banks and run down, while foreign checks go to the transit department, where they are listed on cash letters which are similar to, but larger than, ordinary deposit tickets, to be forwarded to correspondent banks.

Determining the Cost of Departmental Operation

The cost of operating the various departments is found by the use of a work sheet with columns provided for total expenses, proof department, clearing house desk, transit desk, individual bookkeepers, tellers, savings department, discount department, investment department, trust department, and any other breakdown which might be desirable. The annual salaries and other expenses are listed in the total column and tied up with the bank's expense accounts, and are distributed to the appropriate department column. Most expenses can be allocated to a definite department, but of course some must be apportioned. Rent, heat and light, cleaning, etc., may be charged on the basis of floor space occupied. Other expenses of overhead should be distributed on some equitable basis, and those that cannot be apportioned would be placed in a column provided for general overhead. The item cost is found of course

by dividing the cost of operating a department by the number of items handled.

Application of Costs to Individual Accounts

The problem of applying these item costs to the analysis of checking accounts is the next logical step in our discussion, and appears to be the phase of bank cost accounting of interest to the public. The preparation of these analyses consists of crediting the depositor with income earned on the funds placed at the disposal of the bank and deducting therefrom the expense incurred.

It is apparent that the analysis clerk must have available the number of deposits, debit items and city and foreign checks handled for each depositor, since each of these will have been found to carry different costs. It is also necessary to know the average daily uncollected funds, known as float, because these funds cannot be employed by the bank. Since they have been credited to the account, the average daily balance must be reduced by this amount in computing the funds available for investment. The number of debit items and deposits may be readily obtained from the depositor's account. Accumulation of the number of city and foreign checks and the amount of the float requires special attention and is handled in various ways by different banks, but possibly the easiest and most satisfactory method is to record the information on the deposit ticket before leaving the teller's cage. At that point, the items are all together and can be turned over to a special clerk before going to the proof department.

Determining the Float

This clerk would make a notation on the respective deposit tickets in colored pencil of the number of city and foreign checks deposited. A notation would also be made of the amount of float, which is determined by reducing all items to a one day basis. For example: a check for $100 drawn on a point requiring four days for collection would be calculated as $400, being the same as a $400 check collectible in one day. Calculation of the total float on a deposit ticket is quickly done with the aid of a calculating machine by a clerk familiar with the Federal Reserve time collection schedule.

The individual bookkeeper posts the number of items and amount of the float in appropriate memoranda columns on the right hand

side of the depositor's statement, which is detachable, at the time the credit is posted in the deposit column. Before giving the depositor a statement, this section is detached and given to the analysis clerk who counts the number of items handled and computes the average collected balance by deducting the average float from the average credit balance.

Income for the Individual Account Determined

The number of the respective items handled and the average collected balance are transferred to analysis cards maintained for each account. A deduction is made from the average collected balance representing the legal reserve required to be maintained at all times with the Federal Reserve Bank and the cash in vault. The remainder is that part of the depositor's balance which a bank may convert into earning assets or loanable balance.

The depositor is then given credit for the income earned on the loanable balance at the bank's average current rate of return, together with any direct income attributable to the account.

The expenses of handling the account are then extended by multiplying the number of various items by the respective item costs and totaled. The difference between the total income and total expenses thus determined represents the actual profit or loss, as the case may be, of handling an account during the period analyzed.

Due to the peak seasons which many businesses have during a year, it is only fair and reasonable to carry forward a profit in one analysis period to offset a loss in another period within the same year.

Cost of Bank Cost Accounting Not Great

The maintenance and operation of an adequate system of account analysis does not add very much to the operating cost since a large part of the work is done by clerks in connection with their regular work. In fact, the additional expense is so small that it could not be noticed if omitted entirely in computing the item cost.

Service Rendered by the Bank

This discussion would not be complete without a reference to the efficient though somewhat complicated check collection system

maintained by the banks. By means of this system business people are able to collect a great bulk of checks from near and distant places merely by depositing them to their credit in a bank. In turn they are in a position to pay their obligations by transfer of these credits with no more effort than that of drawing a check. Without this system purchases and sales of any business would of necessity be confined to a very small radius. Business activity as we know it today depends as much on this important banking facility as it does on our systems of transportation and communication. The huge volume of transactions cannot be handled at a loss and reasonable business men realize that banks must receive compensation for the service rendered, either in the form of adequate balances with which income may be earned sufficient to cover the costs or in the form of service charges. These charges, if any are made, should be considered a part of the cost of doing business.

Depositors Must Be Convinced of Accuracy of Service Charges

From what I have said I do not intend to convey the impression that there have been no objections from depositors to the payment of losses sustained in handling their business. It is quite natural that people cannot understand why they are now called upon to pay for something they have received so long without expense. The questions most frequently raised indicate some misgiving as to the reliability of the way costs are determined and analyses made.

I believe you will agree that the system I have rather briefly outlined follows sound accounting principles and should accurately reflect the net income or loss on a depositor's account for a given period.

The accounting departments of some of our largest companies are well acquainted with this banking problem. They analyze their own bank accounts periodically for their financial officers who make it a practice to carry adequate balances in banks handling their business. Some even carry dormant accounts in banks situated near their plants which are called upon to cash pay-roll checks in order to compensate the bank for its trouble.

PROCEDURE FOR PROVING OF BANK DEPOSITS AND FIGURING OF FLOAT

By J. D. Smith, Local Manager,
Felt & Tarrant Mfg. Co., Rochester, N. Y.

MOST of the routine work in a commercial bank is centered around depositors and the items shown on deposit slips. The work involves crediting depositors with their deposits, and debiting them with items drawn against their accounts.

Although the total amount shown on the deposit slip is credited as *one entry*, the items which make up this total amount require considerable handling, distributing, and detail work in general, before final disposition is made of them. Any method or plan which will reduce to a minimum the cause of errors in handling these items, or which expedites the work, should be of extreme interest to all bankers. One plan which has already proven itself of extreme value is the *proving* of the deposit.

The Proving of Deposits

Many banks have recognized the necessity for "proving in" the deposits before the actual distribution of checks or items is made. Obviously, if the deposits are proven before the items or checks are distributed, it naturally follows that any subsequent errors will be in the individual distributions, and these can readily be located and corrected. Proving of deposits will therefore eliminate unnecessary work on the part of the bank personnel in locating discrepancies which are in the deposit itself.

Some banks have felt this work was unnecessary because most deposits are in balance when received from the depositor. In cases where errors have repeatedly been found on deposit slips, the banks have endeavored to remedy this condition by calling it to the attention of the erring depositor. The fact remains, however, that the bank is more or less at the mercy of the depositor's peculiarities and habits, when it comes to making out a deposit slip. This has been proven in many cases where banks have endeavored to educate depositors to identifying the items drawn on out-of-town banks, and other information of a similar nature.

Some banks claim that too much time is involved if deposits are proven, which causes delay in routing the items to the departments affected. This of course is very true when the work is done on a listing machine, as experiences in many banks have shown the listing machine to be anywhere from fifty to seventy-five per cent slower than the direct action controlled-key adding and calculating machine.

The Need for Account Analysis

Another function which should be very important to all banks is the analysis of the larger accounts. This was a general function at the time banks paid interest on demand deposits, but with the advent of the new banking laws which prohibited the payment of interest on this class of deposit, the analysis work was largely discontinued. The more progressive banks, however, realize the necessity for accurate records on the activities of their larger accounts. Analysis figuring has therefore steadily been on the increase, due to the fact that banks should know at all times whether or not an account is making or losing money.

A very important part of account analysis is the figuring of float. As all F.D.I.C. member banks are required to submit reports on their deposit liabilities, it necessarily follows that a more accurate and detailed figuring of float is necessary than heretofore.

Procedure for Account Analysis

In order to get a clear picture of the effective and rapid manner in which the direct action controlled-key adding and calculating machine has already been applied on this work in one of the large western banks, we submit this bank's procedure, together with actual forms used.

When the deposit is received by the teller, the cash or currency is counted and reconciled against the amount shown on the deposit slip. The teller posts this amount of cash to a cash ticket, which is sent with a deposit slip (together with all items shown thereon) to the sorting or distribution department. A duplicate cash ticket (which is obtained by carbonization) is retained by the teller. The daily total of all these tickets represents the total cash received by the teller from depositors.

Ordinary Deposits of Individuals and Business Houses

All items are sorted into their various classifications and collection-day periods. This particular deposit used for illustrative purposes contained:

6 checks requiring a three-day collection.
1 check requiring a two-day collection.
2 checks requiring a four-day collection.
2 checks requiring a five-day collection.
1 check requiring a six-day collection.

Of the other checks, ten were clearing house items, and four of them were on us, or drawn on the bank itself.

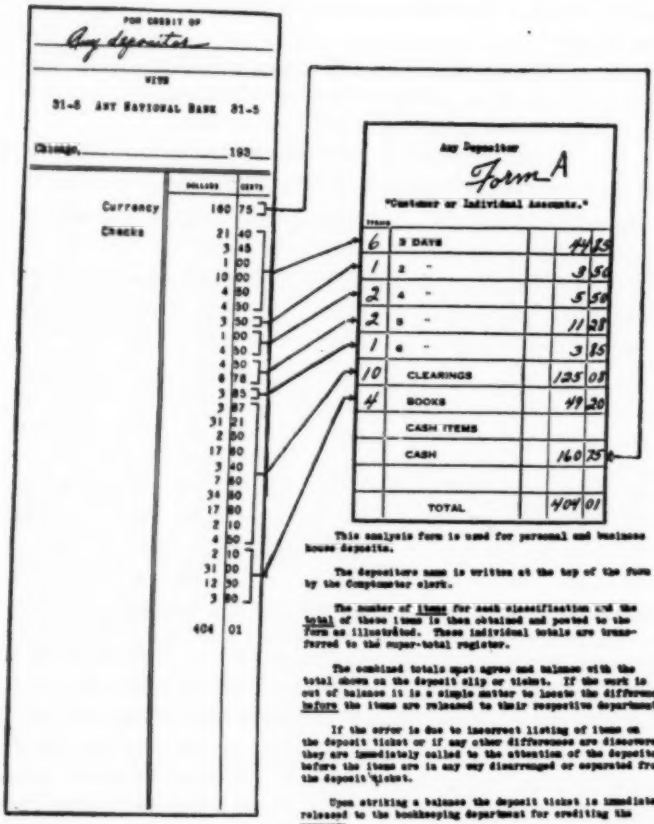
On page 716 there is an illustration of how the information on a deposit slip is analyzed on Form A. This form is used when analyzing the deposits made by individuals or business houses.

The distribution clerk sorts the checks or items of each deposit into the distributions as shown on Form A; in other words, all three-day items, two-day items, four-day items, etc., are grouped together. These individual groups of checks, together with the deposit slip, are then turned over to a controlled-key adding machine clerk, who writes the name of the depositor at the top of Form A.

The number of *items* for each classification, and the total of these items, are obtained and posted to the form as illustrated. Sub-totals are accumulated in the machine and final grand total for the deposit slip obtained. This final figure must agree and balance with the total shown on the deposit slip or ticket. If the work is out of balance, it is a simple matter to locate the differences B-E-F-O-R-E the items are released to their respective departments.

If the error is due to incorrect listing of items on the deposit ticket, or if any other differences are discovered, they are immediately called to the attention of the depositor before the items are in any way disarranged or separated from the deposit ticket. Upon striking a balance, the deposit ticket is immediately released to the bookkeeping department for crediting to the proper account.

Form A really becomes a detailed deposit ticket, and can be used in lieu of the original deposit, whereas under any other method employed the deposit ticket of necessity would be held up, consequently delaying the posting of the deposits. These forms may



This analysis form is used for personal and business house deposits.

The depositors name is written at the top of the form by the Comptometer clerk.

The number of items for each classification and the total of these items is then obtained and posted to the form as illustrated. These individual totals are transferred to the super-total register.

The combined totals must agree and balance with the total shown on the deposit slip or ticket. If the work is out of balance it is a simple matter to locate the difference before the items are released to their respective departments.

If the error is due to incorrect listing of items on the deposit ticket or if any other differences are discovered they are immediately called to the attention of the depositor before the items are in any way disarranged or separated from the deposit ticket.

Upon striking a balance the deposit ticket is immediately released to the bookkeeping department for crediting the account.

These forms may be sorted into bookkeeping sections and used as a control for subsequent postings. This is an added advantage of the use of these forms.

also be sorted into bookkeeping sections and used as a "posting control." This is an added advantage in using these forms.

Analyzing Deposits of Country Banks or Items for General Books

Form B is used when analyzing deposits received from country banks, and for items which are to be recorded on the general books of the bank.

The term country bank refers to small or outlying banks which use the larger banks as depositories for their out-of-town collections. The items under "general books" refer to those transactions which are not ordinarily covered by a general deposit.

The procedure for handling the items is exactly the same as that mentioned under Form A. This form may be of a different color; in this particular case it is printed on yellow stock.

Analyzing Over-the-Counter Payments

Form C is used for checks cashed over the counter by the teller. These checks are not for deposit.

The teller's permanent record is obtained by listing the amount of each paid check on a blotter. When a sufficient number of checks have accumulated they are released to the sorting clerk for distribution in a manner exactly as that explained on Forms A and B. The operator then obtains totals and posts them to their respective places on this form.

The teller attaches a grand total slip to each bundle of checks before releasing them for distribution. This total is obtained from the teller's own listing.

A daily recap of these forms (by tellers) serves as a proof on the amount of credit due the teller. This credit represents the total cash paid out in the cashing of over-the-counter checks, pay rolls, etc. By adding all of the forms for each individual teller an amount is obtained which must balance with the total shown on his blotter. This is an absolute proof and is of extreme value because it is obtained from the actual items handled by the operator. The teller's number is written at the top of the form, by the operator. To distinguish this form from the others it may be of a different color than either of the other two forms already mentioned.

GENERAL BOOKS AND COUNTRY BANKS

Form B

ITEMS				
	3 DAYS			
	2 "			
	4 "			
	5 "			
	6 "			
	CLEARINGS			
	BOOKS			
	CASH ITEMS			
	CASH			
	TOTAL			

TELLER

Form C #3

ITEMS				
	3 DAYS			
	2 "			
	4 "			
	5 "			
	6 "			
	CLEARINGS			
	BOOKS			
	CASH ITEMS			
	CASH			
	TOTAL			

DEPOSITS RECEIVED BY MAIL

Form D

3 DAY			
2 DAY			
4 DAY			
5 DAY			
6 DAY			
U. S. TREAS			
BOOKS			
COLLECTIONS			
CASH ITEMS			
31-1			
31-2			
31-4			
31-7			
31-31			
TOTAL			

Analyzing Deposits Received by Mail

Form D is used when analyzing deposits received by mail. The only difference between this form and the others is that the clearings are itemized according to each member bank. Instead of all clearing house checks being sorted into one group, they are sorted according to individual banks, such as 31-1, 31-2, 31-4, etc. Totals for each classification are obtained in the same manner as on the other forms.

Calculating the Net Deposits

Form E is the official form prescribed by the F.D.I.C. in reporting net deposits, upon which the insurance premium is determined.

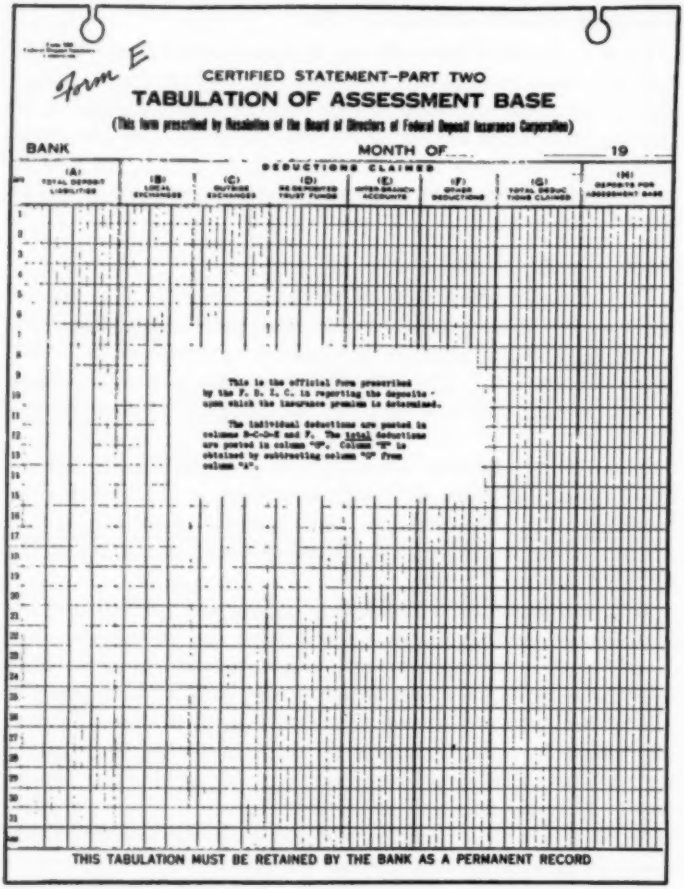
The individual deductions are posted in columns "B", "C", "D", "E" and "F." The total deductions are posted in column "G." Column "H" is obtained by subtracting "G" from column "A."

It can readily be seen that the proving of the deposit and the exact figuring of float are really performed in one operation or handling. The only additional time required by the use of this method is the writing of the depositor's name at the top of the form.

It is extremely doubtful whether anyone will question the advisability of figuring the float direct from the items themselves. Even though it may appear that the work is somewhat retarded, it must be borne in mind that approximately 75% of all deposits in a large bank contain less than five items, and these deposits naturally would have the float figured mentally, thereby allowing the deposit slips to be passed immediately to the bookkeeping department. The remaining 25% of the deposits represent approximately 90% of all the items handled, and these are the accounts which naturally give the greatest amount of trouble.

The bank which has been used as an illustration in this particular procedure reports that the items are handled much more rapidly than heretofore because the departments realize that a positive proof was obtained before the items were released to the various departments.

By cross-adding the individual classification on these forms an exact float is obtained. The grand total of these classifications establishes the amount of the legal deductions allowed by the



From E

CERTIFIED STATEMENT—PART TWO

TABULATION OF ASSESSMENT BASE

(This form prescribed by Resolution of the Board of Directors of Federal Deposit Insurance Corporation)

BANK MONTH OF 19

DEDUCTIONS CLAIMED

(A) TOTAL DEPOSIT LIABILITIES	(B) LOCAL EXCHANGES	(C) OUTSIDE EXCHANGES	(D) RE-DEPOSITED TRUST FUNDS	(E) INTER-BRANCH ACCOUNTS	(F) OTHER DEDUCTIONS	(G) TOTAL DEDUC-TIONS CLAIMED	(H) DEPOSITS FOR ASSESSMENT BASE

This is the official form prescribed by the F. D. I. C. in reporting the deposits upon which the insurance premium is determined.

The individual deductions are posted in columns B-C-D-E and F. The total deductions are posted in column "G". Column "H" is obtained by subtracting column "G" from column "A".

THIS TABULATION MUST BE RETAINED BY THE BANK AS A PERMANENT RECORD

F.D.I.C. in reporting the assessment base upon which the insurance premium is computed.

It is not intended that this procedure will meet with the exact requirements of every bank; it is only intended to show the economy and speed which can be obtained on both proving of deposits and figuring of float. This applies to the smaller banks as well as those found in the metropolitan areas.

COST CONTROL OF BANK OPERATIONS

By Ottmar A. Waldow, Auditor,
National Bank of Detroit, Detroit, Mich.

IT WAS not until after the Banking Holiday, that banks, generally, began to give attention to production methods and production costs, although they had been insisting that their customers know their own costs before consideration would be given for loan accommodations.

The continued decline of investment rates during the past two and-one-half years has made it necessary for banks to look into the recovery of costs incurred without compensating earnings as well as to pay attention to operating efficiency.

The cost system was the medium which brought to light many services which the banks were giving to their customers gratuitously or at a very small fraction of the cost. Today, most of the larger banks and many of the smaller banks are charging customers for services rendered, and in many instances, particularly in the smaller banks, the difference between profit and loss is the result of costs recovered through these new sources.

A cost system for banks need not be complicated nor entail a mass of detail, but it should, in fact, be as simple as possible, giving the maximum of results at a minimum of cost.

Such a system, properly operated pays for itself many times over, because it gives better control by bringing to the management's attention, inefficiencies, leaks and extravagant expenditures in many parts of the organization.

The cost system breaks up the total expenses into various groups which may be easily analyzed and makes it possible to determine whether the various departments are economically operated or whether they are over-manned. It also serves as a base for the determination of proper fees that should be charged for services in order to give the bank a fair profit.

Only Direct Cost Shall Be Used in Comparing Efficiencies

To eliminate unnecessary controversy with department heads and branch managers, in my opinion, each department or branch should be charged only for those expenditures under its direct

control. I do not favor the practice of charging indirect and administrative costs to the operating departments direct. However, the per cent of indirect and administrative expense to total direct expense should be determined in order that proper figures will be available for determining the final cost of any particular item. In other words, to arrive at cost figures used for the purpose of comparing the efficiency of departments or branches, only the direct costs largely controlled by the department or branch managers should be used. The indirect and administrative costs should be added to these simply to determine a basis for charges to the public.

Need for Reducing Work to a Common "Work Unit"

To obtain additional benefit from the data developed for cost work, the operation should be carried one step further. The activity figures of the various departments give us somewhat of a comparison as to the production output, but because of the dissimilarity of the operations performed, the comparisons are often meaningless. This is particularly true when an attempt is made to compare the production of, say, the savings department with the transit department or a savings branch with a commercial branch.

The logical step then seems to be to devise some means that will equalize the operations performed by the various departments in order to obtain a better and truer comparison. This can be accomplished by converting all operations into what, for want of a better name, we will call "work units."

Probably the first reaction that some of you will have to the title "work unit" is that this is another idea to reduce costs through the elimination of personnel; or, that a plan of this nature tends to make machines of our employees; or further, because bank employees are to use their judgment on assigned tasks, that this intangibility cannot be measured.

The Management's Viewpoint

Since we are certain that these are more or less common reactions, let us consider for a moment, the management's viewpoint of this subject. The management is keenly interested in the welfare of each employee on the pay roll. It does not want to devise ways and means to drive the employees every minute. Rather, it

wants to be fair, honest and considerate in dealing with its associates and pay them what they actually should receive for their work. Furthermore, the management is not interested in making or saving money solely at the expense of the employee. But, we must recognize that with low interest rates and other factors, we are today living in a period of competition, where operations, temporarily at least, are receiving major attention. Any institution, to make a profit, yes, even to remain in business, must have high standards of workmanship, developed at a minimum of cost.

In the long run, most of us would rather work with a smaller staff of able, well-paid people using direct methods than with a larger staff of mediocre cheap help, double-checking the work in the hope that eventually it will be done right. We believe that the smaller, efficient staff will do our work better, will be happier, and will be less subject to temptation.

Now then, before setting up our plan, let us first be sure that we treat each employee in a fair, humane and considerate manner. If this plan must be the cause of some employee being displaced, let us be certain that the least deserving is the one who will be considered. If, on the other hand, our plan may cause other employees to do more work in the same number of days and thereby save the institution money, then let us recognize the fact and share with the employee some of the savings. If the manager of a department is able to improve his operations and the work unit production shows higher than average, then let us not forget to recognize that fact and to show our appreciation in a tangible form.

I think you will agree with me—and it has been proved in actual practice—that good clean competition between individuals, groups of individuals or departments, can be fostered and much good can result when some sort of an incentive is offered.

It is very important when devising a competitive plan, to be sure that our measure of performance is reasonably correct. We should not depend entirely upon the opinions of the department heads and branch managers because no matter how impartial and conscientious the rating may be, such decisions are still subject to the human equation. If our work units are based on intelligent analysis and study of the operations performed, the measurement medium will be recognized and respected by the persons who are subjected to the study.

The First Step

Our first step in determining work unit values is to analyze thoroughly the work of each employee. This does not mean that you ask the employee what his various duties are and approximately how much time he spends on this or that; but you must actually observe him perform these duties and time, with a stopwatch, each transaction that he handles.

In order to obtain a fair average, we must not stop by timing a certain operation performed by only one individual, but we should determine the average by timing probably four or five individuals performing the same operation over a period of several days throughout the month. We should also include in each group of individuals analyzed, one very fast operator, one average operator, and one who is not quite up to average.

When the reports of such a study are summarized and the time factors determined for each operation in the various departments and branches, there will probably be some wide discrepancies in the result. But from these data it is possible to determine reasonable averages for each operation and a temporary weighted value can be established for each operation which, of course, is subject to periodic revisions.

After we had determined an average time for each of the various operations performed, we find the operation which requires the least amount of effort and use that as a base for valuation purposes.

First Study Made in a Branch

In our institution, we undertook this study first in our branches, as presenting a simple field for the experiment. It was an experiment when we started it. We worked into it after trying to use unloaded activity figures for the purpose. This produced fair results; but the necessity of making so many allowances for different conditions impelled us to go a step further. We had had in mind the idea of applying the industrial time-study method to our operations. The activity figures gave us a basis for time study. We tried it, and it worked. Now we are in the process of applying it to our main office. It is more difficult there, because of greater detailed variety of transactions; but the method is established,

it is basically simple, and we have no doubt that we shall be able to get up dependable average time factors for coupon collections just as we have for checks cashed.

In our *branch* studies, we developed the following weights: *Clearings and Transit Checks* were determined as the operation requiring the minimum of effort (thirteen seconds). A base weight of 1.0000 was given for each item handled in this classification. The other operations were weighted as follows: *Change transactions* 1.5384; *Commercial Debits* 2.1538; *Checks Cashed* 2.3077; *Utility Bills* 2.6154; *Commercial Credits* 5.3846; *Savings Credits* 6.9230; *Savings Debits* 9.2307; *Official Checks* 16.6923; *Savings Accounts Opened* 25.4615; *Foreign Drafts and Travelers Checks* 41.5384; *Collections* 46.1538; *Commercial Accounts Opened* 63.6923; *Loans* 138.4615.

Steps Leading to Final Comparative Reports

So much for our method of determining work unit values. The following steps were taken to gather the information for developing the final comparative statistical report:

(a) Each employee is furnished a form on which he records his daily transactions.

(b) At the end of each month, the transactions of all the employees in a given department, are summarized on a monthly departmental activity form.

(c) These forms are then forwarded to the statistical division of the auditing department which converts the various individual transactions of each department into comparative work units.

(d) The total time of all employees in the department, including operating department heads and relief employees, for the month, is converted into total man-days.

(e) A schedule is then prepared, listing the various departments and indicating with respect to each department, "Total Transactions Converted into Total Work Units," "Total Man Days," "Average Work Units per Man Day," as well as "Salary Cost per Work Unit."

(f) The auditing department, when making periodic audits of the various departments, actually checks about one week's transactions. This actual check furnishes a basis

for a test check of the transactions as reported by the individual departments.

The comparative study mentioned under (e) is used by the management as a sort of yardstick. I use the word "yardstick" because we cannot say that this study is scientifically accurate. This study reveals the departments considerably above or below average, concentrating the management's attention on these departments and an effort is made to determine the reason or reasons for the difference.

Means Provided for Improving Operations of Less Productive Departments

We were pleasantly surprised by the number of cases we found in the branches which showed good production and cost factors, and these provided the means for improving the operation of those not measuring up so well. For instance, we had believed that savings transactions in branches should be kept out of the block system. We found one branch with heavy commercial and light savings activity which showed very good production and cost factors (#13). That office was handling its savings transactions through the block. We tried that method in two other offices (#9, #18) which, under similar conditions, were not doing so well, and their costs dropped the next month. We didn't take out any regular people, but they needed less relief help. That, of course, was under the N. R. A.

Basis for Salary Adjustments and Advances Provided

This study also indicates the salary cost per work unit. This is done in order that consideration be given to differences in salary in separate departments. One department having junior employees with less pay roll may show a lesser production in work units, yet the salary cost per work unit may be identical with an office having senior employees showing greater production per employee.

This comparative departmental study enables the management to measure the ability and determine the calibre of the department heads and branch managers, and if every other factor is equal, provides a base for salary adjustments and advancement as well as indicating to the management the weak spots where corrective measures should be applied.

The work unit production for employees doing like work is also considered by the management. Those employees showing a high production are naturally entitled to more consideration than the average or below average individual.

An unbiased study of this nature made by one outside of the department should eliminate favoritism and prejudice and should prove beneficial to the conscientious employee.

There is another advantage that accrues from a competitive plan such as the work unit plan in that it aids materially when one is attempting to change some routine procedure which tends to improve operations. The department managers and employees will tend to cooperate rather than hinder when they know that such change will reflect better production output.

As production standards improve, it will tend to eliminate the laggards, and as the laggards are eliminated, the better employees should receive better compensation.

Advantage of a Contented Personnel

After all factors are considered and no matter what our aims may be, in the final analysis, are we not all interested in the compensation we receive? An institution which can afford to pay a little higher wage standard than the average will also have a more contented personnel. A contented personnel is one of the most important intangible assets of which any institution can boast. They present your bank in the best light to the public—that's obvious. But, as auditors, you should consider two other great advantages of a well-paid, loyal staff. The emergency line at which some will be driven to embezzle is higher; and the don't-give-a-damn attitude is more rare.

The Duty of the Bank Auditor

I have been presenting to you a method by which you can determine which of your departments are well run and which are not, which of your people are able and which not so able. It needn't cost you much. Most of the figures you already have in some form or other. With calculating machines, one good man can accumulate them to give these results in a few days a month. With modern duplicating devices you can prepare them in a few hours for presentation to your executives. And don't forget—only you can do it. I haven't said anything yet about one important element—

the human element. Only the auditor's men have the opportunity to work closely with the people in a department for several days at a time, get to understand their peculiarities and personal problems, and yet be disinterested. The operating officers can't—they can't afford the time. The department managers can't—they must work with their staffs month in and month out, and can't be impartial. If you have the right kind of assistants, they can transmit to you, understanding and a degree of sympathy with which to temper the cold figures. That combination gives you a unique opportunity; and, gentlemen, don't you believe that it imposes upon you a duty?

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